AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A communications system for transmitting forward and reverse signals, the communications system comprising:

a plurality of optical nodes including a reverse transmitter, each optical node for receiving reverse analog signals and for providing reverse digital optical signals, each reverse transmitter comprising:

a converter for converting a said reverse analog signal into a ~~digital~~ digitized reverse ~~optical~~ signal;

a carrier-detect circuit coupled to the converter for detecting the presence of a carrier signal in the reverse analog ~~digital optical~~ signal;

a delay circuit coupled to the converter for delaying the ~~digital optical~~ digitized reverse signal; and

a switch coupled to the delay circuit and controlled by the carrier-detect circuit,

wherein the reverse transmitter ~~provides~~ transmits the reverse digital optical signal ~~in a single wavelength~~ only in the presence of a detected carrier signal; and

a reverse receiver, coupled to the plurality of optical nodes via a digital network, for receiving the ~~single wavelength~~ reverse digital optical signal from each of the plurality of optical nodes, wherein the digital network passively combines the reverse digital optical signals from the plurality of optical nodes without performing wave division multiplexing on the received digital optical signals.

2. (Canceled)

3. (Currently Amended) The communications system of claim 1, further comprising:

~~a digital network coupled to each of the plurality of optical nodes for receiving and combining the digital optical signal received from each of the plurality of optical nodes;~~

the reverse receiver coupled to the digital network for receiving the combined reverse digital optical signals, and for converting the combined reverse digital optical signals to analog ~~optical~~ signals; and

a headend coupled to the reverse receiver for receiving and processing the analog ~~optical~~ signals,

whereby, due to a burst-mode transmission from each of the plurality of optical nodes, the digital network combines the ~~combined~~ reverse digital optical signals from the plurality of optical nodes using header identifier information.

4. (Currently Amended) The communications system of claim 3, wherein the communications system is a cable television system that may include both a digital headend and an analog headend for

generating and receiving ~~the~~ combined digital optical signals in both the digital and the analog formats.

5. (Currently Amended) The communications system of claim 4, wherein the communications system further includes:

a descriminator circuit coupled to the digital network for analyzing the header identifier information contained in the passively combined reverse digital optical signals,

wherein dependent upon the header identifier information, the descriminator circuit provides the combined reverse digital optical signals to one of ~~in the digital format to~~ the digital headend and ~~provides the combined analog optical signals in the analog format to~~ the analog headend.

6. (Currently Amended) A communications system for transmitting and receiving optical signals over a communications medium, the communications system comprising:

subscriber equipment for transmitting reverse ~~optical~~ signals;

a plurality of optical transmitters coupled to at least one of the subscriber equipment for ~~digitizing the reverse optical signals~~ converting the reverse signals into reverse digital optical signals having a predetermined wavelength, wherein each of the plurality of transmitters comprising:

a carrier-detect circuit for detecting ~~when reverse optical signals are present within the transmitter~~ the presence of a reverse carrier signal;

a delay circuit for preventing loss of information in the reverse signal due to the carrier-detect circuit~~delaying the reverse optical signals~~; and

a switch, coupled to the delay circuit and controlled by the carrier-detect circuit, wherein when the carrier-detect circuit detects a reverse ~~optical~~ carrier signal present in said reverse signal, the carrier-detect circuit allows the reverse ~~optical~~ signal to be converted to a reverse digital optical signal and transmitted upstream through ~~the~~ a digital network;

~~a~~ the digital network, coupled to each of the plurality of transmitters, for passively combining the ~~digital~~ reverse digital optical signals without wave division multiplexing, ~~wherein the combined digital reverse optical signal has a single wavelength~~;

a receiver coupled to the digital network for converting the reverse digital optical signals back to the original reverse ~~optical~~ signals; and

a headend coupled to the receiver for processing the reverse signals. ~~optical signals,~~

~~wherein each of the transmitters combines the reverse optical signals received from the subscriber equipment into a combined reverse optical signal.~~

7. (Canceled)

8. (Canceled)

9. (Currently Amended) The communications system of claim 6, wherein each of the plurality of transmitters ~~blocks the reverse optical signals and encapsulates the blocks into~~ formats said reverse digital optical signals as packets with associated identifier header information for identification within the headend.

10. (Original) The communications system of claim 9, wherein the communications system is a cable television system that may include both a digital headend and an analog headend.

11. (Original) The communications system of claim 10, wherein the communications system further comprises:

a descriminator circuit coupled to the digital network for analyzing the associated identifier header information,

wherein dependent upon the identifier header information, the descriminator circuit provides the packets to one of the digital headend and the analog headend.

12. (Original) The communications system of claim 6, wherein the communications medium is a hybrid fiber coaxial cable.

13. (Original) The communications system of claim 10, wherein a control system is used in connection with both the digital and the analog headends for preventing collision of the reverse signals.

14. (New) The communications system of claim 6, wherein at least one of said plurality of optical transmitters further comprises an analog-to-digital converter for converting an analog reverse signal to a digitized reverse signal, wherein said optical transmitter converts said digitized reverse signal to provide said reverse digital optical signal.

15. (New) The communications system of claim 14, wherein said carrier-detect circuit is coupled to the output of said analog-to-digital converter.

16. (New) A method for conducting reverse communications in a subscriber television system, comprising:

receiving at an optical transmitter a reverse signal from subscriber equipment;

converting said reverse signal to a reverse digital optical signal only when the presence of a reverse carrier signal is detected by a carrier-detect circuit;

transmitting said reverse digital optical signal upstream to a digital network;

passively combining a plurality of said reverse digital optical signals at a digital network without the use of wave division multiplexers; and

converting at a receiver said plurality of reverse digital optical signals back to a plurality of said reverse signals.

17. (New) The method of claim 16, further comprising converting an analog reverse signal to a digitized reverse signal by using an analog-to-digital converter.

18. (New) The method of claim 16, wherein said reverse digital optical signal is formatted in packets and combining is performed using header identifier information contained in said packets

19. (New) The method of claim 16, wherein said plurality of reverse digital optical signals are transmitted at a common wavelength and combined at said common wavelength.

20. (New) The method of claim 16, further comprising:

providing said reverse digital optical signals to one of an analog headend and a digital headend,.

21. (New) The method of claim 20, wherein said reverse digital optical signals are formatted in packets and provided to one of said analog headend and said digital headend based on analysis of packet header information by a descriminator circuit.

22. (New) The method of claim 16, further comprising decombining said combined plurality of reverse digital optical signals without the use of wave division multiplexers